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## Using a Smartphone Application for Customer-Centric Banking

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### Abstract

*The banking industry is under pressure. In order to compete, banks should adapt to concentrating on the specific customer needs, following an outside-in perspective. This paper presents the design of a business model for banks that considers this development by providing flexible and comprehensive support for retail banking clients. It is demonstrated that the identification of customer processes and the consequent alignment of banking services to those processes implies great potential to increase customer retention in banking. It will be shown that information technology – especially smartphones – can serve as an interface between customer and suppliers to enable an alignment of offerings to customer processes. This approach enables the integration of banks into their customers' lifestyle, creating emotional value added, improving the personal relationship and the customers' affiliation with the bank. The paper presents the design of such a customer-process-centric smartphone application and derives success factors for implementation.*

### Keywords

Banking, smartphone, customer process, customer centricity, mobile technologies

### INTRODUCTION

The structure of competition in the banking sector has substantially changed in the last years. All over the world and also triggered by the recent global financial crisis, this industry is facing an ongoing – often cross-border – consolidation of market participants (e.g. Ekkayokkaya et al. 2009). Competition in the banking sector has been intensified by the increased cost transparency of standardised financial products, accelerated by easily accessible information which enables convenient comparison of prices and conditions of a wide range of financial products and suppliers. The emergence of digital distribution channels led to a decrease in access costs and, in turn, new financial service providers, which offer products at lower prices and more favourable conditions, enter the market (Tropp and Reichel 2007). However, the emergence of new distribution channels also demands for new product specifications and facilitates the design of new business processes and structures, which enables well-established banks to differentiate and, in turn, find new ways to compete in a market of fierce competition.

The convergence of banking products forces banks into committing to a rigorous customer-centric view in the design of their strategies, service portfolios and enabling process and IT landscape. Already in 1954, Drucker emphasised: “[...] *it is the customer who determines what a business is, what it produces, and whether it will prosper*” (Drucker 1954). Since then companies in all kinds of industries started to deviate from the so far prevalent approach of product orientation towards more customer-oriented business models. Now especially in the segment of retail banking, where products can be regarded as being highly standardised, a new strategic approach is necessary.

However, past efforts in establishing more customer-centric approaches in banking did not necessarily lead to increased profitability (Burrin 2004). Customer orientation has so far been understood by many banks as solely performing extensive and comprehensive advisory services and exploiting opportunities of cross-selling (Booz Allen Hamilton 2003). Still, business models are predominantly product-oriented (Shah et al. 2006).

According to Engstler (2006), banks have to actively design their appearance in the market, in order to increase sales of financial products in the future. Engstler describes three main strategic considerations that have to be taken into account by banks. First, the scope of services has to be orientated on the needs of customers. Second, the design of customer contacts has to create functional and also emotional value added to the customer. Third, the appearance of a bank has to be adjusted in such a way that (a) trust is created by presence, strengthening brand leverage in all relevant distribution channels, (b) integration of distribution channels and control over channel-wide sales process is ensured and (c) cooperation with service providers who can generate value added for the customer increases the frequency of interaction between the bank and its customer.

In order to differentiate from competitors, customer centricity has to incorporate the fulfilment of customer needs and expectations. A promising approach to improve customer orientation is the alignment of all banking services to so called *customer processes* (Schmid et al. 2000). A customer process can be characterised as the entire end-to-end process that customers pass through to meet a desired need or to solve a problem until satisfaction is met (Behara et al. 2002). Thus, a customer process is centred around a specific customer need (e.g., buying a house) and not limited by the offering of one entity along this process (e.g. provision of financial services).

This paper will first provide an example how banks can change their business model in order to better meet customer needs by focussing on customer processes. It will be argued that the consequent alignment of offerings to the fulfilment of needs derived from entire banking related customer processes serves the real needs of customers. It will be shown that advanced information technology in general and smartphones in particular enable the creation of functional and emotional values. Banks are generally perceived as a necessity, but not as part of lifestyle. The provision of a smartphone app to support certain customer processes of retail clients enables banks to better integrate into the lifestyles of their customers and to provide customer centric solutions in financial services. This paper will show the design of smartphone applications for establishing the holistic support of customer processes in banking.

## CUSTOMER CENTRICITY AND CUSTOMER PROCESSES

The changing environment in the banking sector and the massive increase in competition and performance pressure forces banks to find new ways to differentiate from competition in order to be able to compete in the future. Thus, it seems banks have to focus to establish either cost leadership or a strong differentiation. Higher cost transparency and the standardisation of financial products led to an emergence of low-cost financial service providers (e.g. internet banks). Established banks are unlikely to compete in a price war against these, hence they have to offer value adding products and services to their customers that clearly distinguish from competitors' offers. More innovative and even drastic approaches of differentiation have to be followed which cannot easily be copied by competitors. Building up a strong relationship with the customer can be one essential factor of differentiation, especially considering the low switching costs for many products in retail banking. Karakostas et al. (2005, p. 855) emphasise this as: "customers are just a mouse-click away from competitors". However, establishing a customer relation which cannot be imitated by competitors is not so easy.

The evaluation of the banking products' quality by the customer depends on a number of special characteristics. The quality of banking offerings can often not be assessed by a customer in advance, and (s)he will mainly "learn" over time and through interactions with the bank to what extent demands have been truly considered and satisfied. In addition, information asymmetry between the customer and the bank is substantially higher than in other industries (Dubs 1998). Furthermore, handling today's customer relationship in banking incorporates the consideration of the following factors (Karakostas et al. 2005): (a) switching costs are very low, (b) knowledge about the customer can generate essential opportunities for differentiation, (c) satisfied customers are less expensive and they "freely" advertise by mouth-to-mouth communication, (d) customer retention can lead to decreases in operating costs, (e) acquisition of new customers has become increasingly more expensive compared to retaining customers, (f) modern information and communication technologies can help to better build and retain strong relationships with the customer, and (g) customer data has to be seen as an asset. An increasing number of researchers has been analysing methods and approaches to customer-oriented banking (e.g. Karakostas et al. 2005; Neilson and Chadha 2008; Shah et al. 2006). Especially for retail banking, "satisfaction has been found to be the ultimate measure of service performance" (Neilson and Chadha 2008, p. 204).

When targeting customer centricity, companies have to face substantial changes (Shah et al. 2006). Implementation is complicated when organisational culture is resistant to changes. Thus, one challenge is to establish a customer-centric culture throughout the company. Furthermore, the organisational structure has to be aligned in such a way that "all functional activities [are] integrated and aligned to deliver superior customer value" (Shah et al. 2006, S.116). In a product-oriented company, organisation occurs functionally (R&D, logistics, sales, etc.). These so called functional silos have to be overcome in order to achieve customer orientation and a re-organisation has to occur along customer-centric business processes. The focus on business processes instead on functions is a necessary change banks have to follow in order to both meet customer

demands and to operate more efficiently. Burrin (2004) states that customer centricity seems to be related to higher profitability if contemporary process-based information technology in terms of an end-to-end process is applied. Managing and improving whole business processes is not only important for customer centricity but also for increasing efficiency (e.g. in processing of loans, securities, etc.).

All these aspects have to be taken into account by banks when establishing a strong relationship with their retail customers. Hence, the so far prevalent product-oriented approach including a better management of the interface to the customer seems not to be sufficient for differentiating in such a way that is not easily imitable by competitors. Delivering an even stronger focus on customer needs by focusing on customer processes (and aligning business processes to them) can deliver the feature of differentiation which clearly creates a competitive advantage within this industry.

Also Schmid et al. (2000) state that in order to entirely fulfil customer needs and expectations, the complete customer process should be analysed and the banks offerings should be adjusted accordingly. During each step of this process, the customer needs support in terms of, for example, information, services, and products from different kinds of suppliers in order to fulfil the superior need which releases the customer process. Examples of customer processes related to retail banking are “retirement”, “buying or selling a house”, and “asset building/financial planning”. During these processes several interfaces between banks and customers arise and process different “sub-needs” within a customer process. Generally, a central ‘process owner’ that could serve as a contact to the customer over the whole customer process does not exist. Instead, the customer has to get in touch with many different suppliers. For some specific customer processes, the creation of additional interfaces to the customer can bear potential benefits for banks, as it will be described in the following section.

Before applying such a customer process oriented business approach, the bank has to identify these customer processes which are “near” or related to banking and where support is desired. This enables a bank to focus servicing these customer processes holistically, where the expected benefits in terms on profits and customer retention are greatest. In an empirical survey, Kahmer and Moormann (2005) found out for which customer processes a stronger support by banks is generally desired and for which customer processes there seems to be no need for holistic support by banks (Table 1). The target group involved in the survey were retail clients.

**Table 9. Customer processes and the degree of desired support by banks (Kahmer and Moormann 2005)**

Strong desire for support	Limited desire for support	No desire for support
Retirement	Buying or selling a car	Buying and administrating IT
Buying or selling a house	Buying and protection of household goods	Travel planning
Pension Coverage	Private administration	Further (professional) education
Covering individual risk	Renting and furnishing an apartment	Renovation; home improvement
Death and inheritance processing		
Asset building; financial planning		

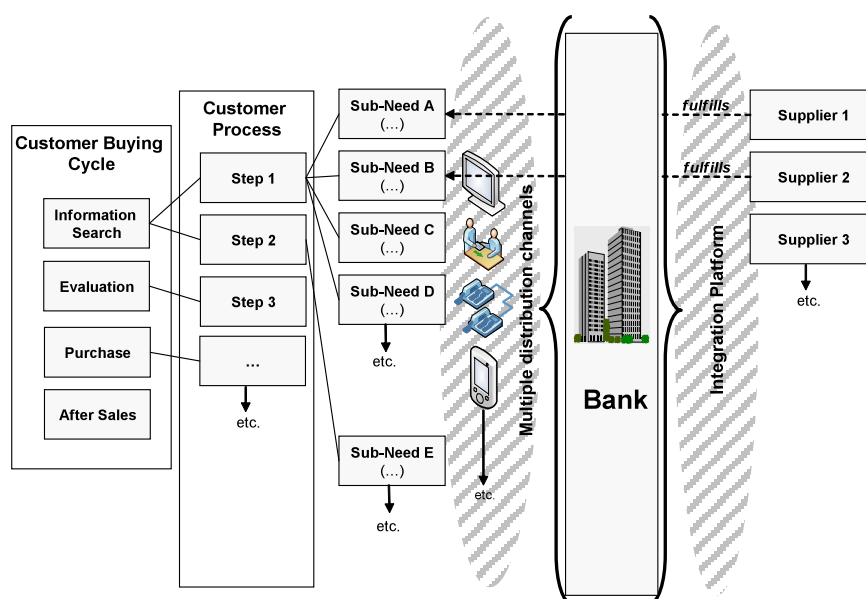
When servicing the whole process chain a bank should of course not produce all products, services and information on its own. In a customer-process-centric business model the role of the bank would be to serve as primary contact to the customer and to offer the right services he needs from the banks’ pool of cooperating partners in its business collaboration network, which is described shortly in the next paragraph. Such a business model is the prerequisite for launching the proposed smartphone application supporting customer-process-centric retail banking.

## **CUSTOMER-PROCESS-CENTRIC BUSINESS MODEL FOR RETAIL BANKING**

Approaches for customer-process-oriented business development can e.g. be found at Flück (2002) and Heinrich (2002). The latter employs the Customer Buying Cycle (CBC) to derive requirements and expectations of customers as the starting point of conceptual design of a customer-oriented business model for retail banks. The CBC includes the phases of information gathering, evaluation, purchase and after-sales. Based on these steps, most customer processes can be structured, so that the CBC serves as a basis for deriving the customer process steps and the corresponding needs.

Winter (2003) proposes a model for a business collaboration infrastructure that fits the purpose of a customer-process-centric business model for banking. In his framework, the needs derived from a customer process are

fulfilled by different types of service providers within a cooperation network; however, all offerings are bundled by the service integrator who is the single point of contact to the customer throughout his whole process. The business model described in the following is based on Heinrich's and Winter's approaches and illustrated in Figure 1.



**Figure 19. Draft of a customer-process-centric business model for retail banking**

For a specific customer process, the single steps are derived following the customer buying cycle. Each sub-need should be able to be satisfied by the offerings of one or more partners in the cooperation network – the bank included. The bank as the service integrator bundles all these offerings, and is the primary contact to the customer via multiple distribution channels throughout the whole customer process chain. On the other hand, the offerings of the suppliers are bundled via an integration platform. The bank now can support the customer throughout his entire process and choose the best fitting offers from his supplier network. The bank is now more customer-oriented since it does not provide a range of independent products anymore, but offerings that in total serve for satisfying a superior need – the customer process.

The holistic support of customer processes can generate the following advantages for banks. First, if the bank takes over a leading role in supporting a customer process, it is the primary contact point between the customer and the suppliers. Thus, the bank can intensify the personal contacts and bind the customer closer to the bank. Furthermore, even if the bank does not deliver, develop or transact the products and services itself, the customer might appreciate to be guided and supported by the bank during his whole customer process and thus might build up trust to the bank, getting bounded to his main bank again. From an economic viewpoint there is potential for additional income in the form of a service brokerage fee. Furthermore, fully supporting whole customer processes bears the potential for banks to enter a customer process as soon as possible and when it e.g. comes to financing a specific need for fulfilling the customer process, the bank can directly position their own offerings.

How can a bank now gain partners for the cooperation network? Joining enables the cooperating partners to reach a broader range of customers, increasing the opportunities of increased sales and economies of scale in production. Value-added services to the customers can as well be sub-branded with the partner's logo leading to increased brand awareness. Due to a constant and fixed cooperation with the bank, partners can furthermore indirectly benefit from increased customer loyalty towards the bank. Partners can also benefit from cross-selling opportunities in different customer processes which are integrated by the bank.

## A SMARTPHONE APPLICATION FOR ESTABLISHING EMOTIONAL VALUE

The intention of this paper is to highlight the potential of using a smartphone application as the primary channel of communication to the customer, which enables the support of the whole customer process. Via the application the customer can access the best fitting offers for the individual customer process steps. These offers can be either delivered by suppliers (where the products/services do not fit the core competencies of the bank) and best fitting products/services of the bank (core competencies). It should be noted, that it is not necessarily required, that the actual purchase is performed via the app. It can also serve to support customer process steps by e.g. providing a link to a supplier's e-shop via or by providing the opportunity to directly send an e-mail for making

an appointment with the bank. In addition to providing this functional value added, the smartphone application also enables to arouse emotional value added to the customer. Emotional value adding products can be defined as “products that ‘fit’ the emotions of the users, that is, products that elicit the emotions that the user would like to experience” (Desmet et al. 2001, p. 32). The emotional value is created by emotional responses which are determined by how the product corresponds with the buyer’s set of goals, standards and attitudes (Ortony et al. 1988). Banks are generally perceived as a necessity, but not as part of lifestyle. The opportunities of creating emotional value for banking products are limited.

New IT devices can serve as an enabler for this integration and add new channels and opportunities for customer touch points. People nowadays are often devoted to their mobile devices, and it can be expected that this trend will even increase. It is interesting to notice that “research shows that the cell phone bill is the first bill consumers will pay – before their mortgage, rent or any other debt” (Steward 2009, p. 17). Today’s Generation Y is expected to place much more importance to their mobile device than the “traditional” desktop internet access (Steward 2009). Thus, banks have started to explore and integrate the mobile market into their customer interaction strategy. Today, only 10% of financial institutions in the US offer mobile banking yet (Steward 2009). The gain to enter this market is not driven solely by offering location-based services as it has been the primary goal for mobile services so far. A mobile application enables banks to enter the centre of people’s lives: the mobile device. The approach presented in this paper goes beyond what has been so far understood as *mobile banking*, but shows how banks can holistically support customer processes and hence establish real customer-centric banking by providing a smartphone application. The mobile phone is becoming more and more fully integrated into the lifestyle of their owners. Smartphones are mainly used by people who are constantly en route. They conduct work-related tasks, organise private issues or just shop mobile. Targeting the smartphone users offers numerous new opportunities to place product offerings – also for banks. This enables to integrate banking products into the lifestyle of smartphone owners.

The emergence of smartphones has increased revenues in a stagnated mobile phone market (Curtis 2009). According to Curtis (2009, p. 22) “even mobile services, which are often criticized for being user-hostile, are enjoying increased popularity on the back of the smartphone boom.” Most recently, the focus of mobile services is on lifestyle applications that serve for individual customer needs. The range of applications can generally be downloaded from the phone manufacturer’s or a third party provider’s platform. The iPhone by Apple, for example, offers currently more than 50,000 services in the App Store. Some “Apps” are e.g. weather forecasts, language trainer, taxi finder, an individualised job search or offer e.g. direct connections to social networking platforms like Facebook, Myspace, etc. Even for the pharmaceutical industry, diagnostic tools in form of iPhone apps are in discussion (Rich 2009). The amount of new applications available for smartphones is enormous, and there seems to be no limit in the scope of offerings. Banks have entered this trend and offer more and more services via mobile phones, promoting *mobile banking*. For example, Visa has rolled out a pilot project on using the mobile phone for credit card purchases, where the phone is simply waved at special checkout readers. Furthermore, a number of banks (e.g. Commonwealth Bank, ANZ, Bank of America, Chase) and further financial services providers (e.g. Mint.com, Bloomberg) already offer dedicated services in the App Store. Common offerings in the mobile banking segment are short message services (SMS) as part of secure transactions (e.g. CBA’s Netbank), checking balances of accounts, conducting money transfers, and receiving credit card information like outstanding balance or available credit (Steward 2009). Further services include payment of bills, funds transfer and locating the nearest branch or ATM. In addition, especially in Asia, mobile money transfer and payment via contactless NFC (near field communication) transactions is gaining acceptance (Telecom Asia 2008). However, currently available mobile services tend to be piecemeal solutions that do not provide orchestrated support for an entire end-to-end scenario of a customer process.

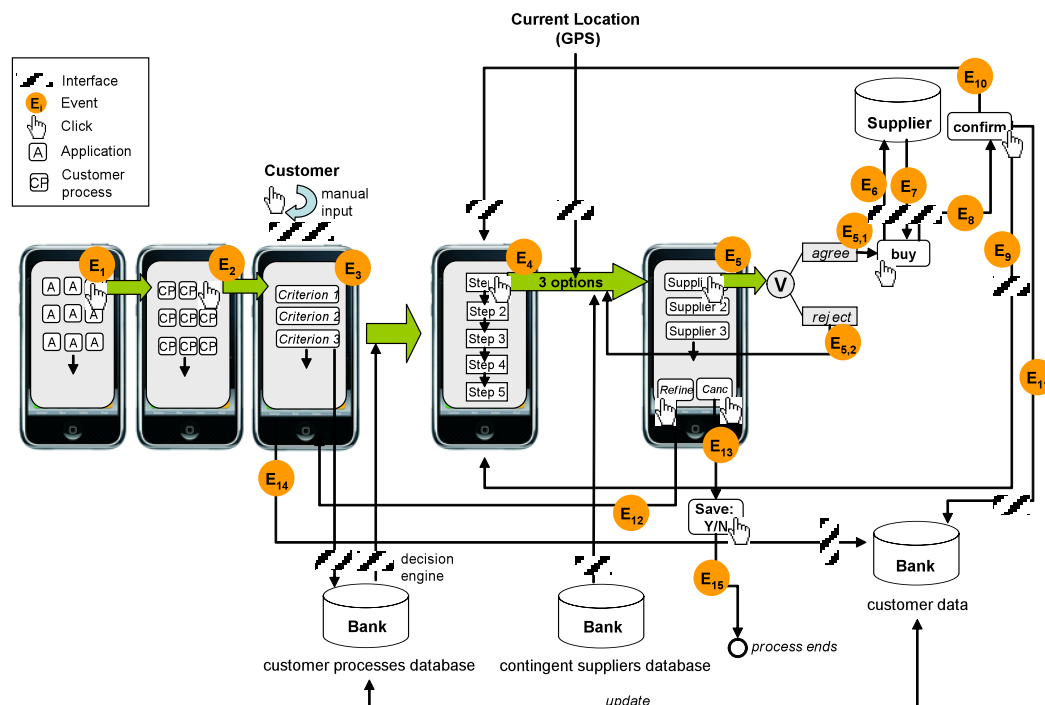
The iPhone App store encountered a boom in its first months, resulting in the billionth download after just nine months. However, “the gold rush is over” and new developed apps need to be truly useful (Learmonth 2009, p.14). As a consequence, the development of an application which fully meets people’s needs around their financial demands and which has a user-friendly interface, will offer banks great opportunities to enter the App market and to early integrate into this new way of service offerings.

A customer-process-centric smartphone application for banking can be analogous to an “App” by Apple, but encounter also aspects of mobile banking. It can be implemented by a rather static application, downloadable with predefined features, or a more dynamic application, which is constantly updated with customer data by the bank. The functionality of a static application will be drafted in the following. Afterwards major issues on the possibilities for a dynamic application are presented.

### **Customer-Process-Centric Smartphone Application for Establishing Customer-Centric Banking**

Based on the guidelines for design science according to Hevner et al. (2004), this paragraph presents a relevant IT artefact. Such an artefact “must be described effectively, enabling its implementation and application in an

Analogueous to applications like “my videos” or “my weather forecast”, a further application, named e.g. “my customer process”, will serve the purpose to offer the integrated product and services by the bank, stemming from the business model described in the previous section. Clicking on the bank’s application ( $E_1$ ) will show a display where different banking-related customer processes are listed (e.g. “housing”, “car purchase”, “wealth accumulation”, etc.). The amount and scope of customer processes provided can be oriented on the results of Kahmer and Moormann (2005), summarized in Table 1 of this paper. However, it still requires an examination for the individual banks to identify these customer processes, which are most relevant to their retail customer base. The customer can then choose his actual process of relevance. Clicking on this object initiates the next event ( $E_2$ ). Here, an input mask appears where the customer has to enter certain criteria which specify his need. E.g., when the customer process “housing” is chosen, in the next step the customer can individualise by entering criteria according to type of housing (rent vs. buy; commercial vs. private), location, size etc. The criteria of choice should be predefined and stored locally on the application or remotely in the ‘cloud’ of the bank. Based on the data entered by the customer, the individualised customer process for “housing” will be derived. Differences in customer processes in housing can e.g. occur if as a criterion it was entered “buying” and “house” versus “renting” and “flat”. Within the bank’s customer process database it must therefore be predefined which combination of criteria result in different customer processes.



The derivation of the best fitting individualised customer process can e.g. be achieved by the usage of a decision engine ( $E_3$ ). Here, the application definitely needs a connection to the back-end system of the bank as a basis for deriving the corresponding customer process. Furthermore, any data provided by the customer should be used to update the customer profile where required. As a result of  $E_3$ , the smartphone user receives a graphical representation of his customised customer processes on his phone, where all his tasks and needs to consider for e.g. “housing” will be listed in a chronological order.

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provided. Conditional upon his choice, the customer receives offers of suppliers on his mobile phone, which can best fulfil the needs of this specific customer process step. Now the smartphone user can choose an offer ( $E_5$ ) – a specific combination of product/service and supplier – and decide whether to accept ( $E_{5,1}$ ) or to reject ( $E_{5,2}$ ) the offer. If the customer accepts, he can click on a “buy” button. Afterwards, the order will be directed to the supplier’s back-end system ( $E_6$ ), where the order is then identified and relevant additional information on price, conditions, etc. are sent to the mobile phone ( $E_7$ ). The final agreement on purchase is then processed after being redirected on the supplier’s system and by clicking on a “confirm” button ( $E_8$ ).

The final confirmation should be conducted on the supplier’s system, since all legal issues related to online-purchase will now be under the responsibility of the supplier. However, it should be agreed upon with the suppliers, that they create a special website for purchases via the smartphone application in order to ensure uniformity in appearance. For example, these sites should be sub-branded by the bank, so that brand awareness is created until final purchase. Furthermore, there should be an automated connection from the supplier’s system to the application for the purpose of (a) sending a confirmation and the related documents – e.g. confirmation, guarantee, etc. – after successful purchase ( $E_{10}$ ) and (b) sending information that initiates an update of the individualised customer process ( $E_9$ ). This could indicate that offerings of after-sales services are refreshed according to the actual after sales services of the chosen supplier. Moreover, after confirmation, the purchasing information should be automatically sent to the bank’s database in order to update the corresponding customer data ( $E_{11}$ ).

If at node  $E_5$  the customer did not agree upon the offers, the customer is redirected to the supplier suggestions output ( $E_{5,2}$ ). The customer might further be given the opportunity to refine the criteria he entered at  $E_3$  ( $E_{12}$ ) or to end the App ( $E_{13}$ ). The latter choice should indicate the option to save the provided customer process ( $E_{15}$ ).

The primary purpose of the presented application should be to serve as an interface between the customer, the bank and the suppliers within the cooperation network. Thus, the application should mainly work as a service broker and should not be involved in the actual purchasing process. There are numerous reasons for this. First, legal implications related to a purchase will be left to the suppliers, so that the service integrator does not have to give any guarantee for the products and services of the cooperation partners. Furthermore, especially for banking products, in most cases online purchase is not possible since signatures are needed. Thus, in case of the decision to buy a financial product (e.g. loan for house) the customer cannot fully buy this online. However, connections to the bank’s database (e.g. at  $E_{11}$ ) can deliver relevant customer information and e.g. fasten the loan approval process. Furthermore, via the application links to the e-shops of relevant suppliers ( $E_6$ ) or the possibility to directly contact the relevant salesperson (e-mail, SMS, direct call) can be provided.

However, some interfaces between the application and the bank’s or the suppliers’ back-end systems have to be specially managed when implementing the application. First, at  $E_3$  the decision engine has to be fed with data from the bank’s data warehouse, so that only central updating is needed. The same reasoning counts for the interface to the bank’s system at  $E_4$ . Here a central administration of the database of contingent suppliers is of major advantage in order to be able to provide the customer up-to-date suggestions for suppliers. Furthermore, the dataflow between the application and the supplier’s system at  $E_6$ ,  $E_7$ ,  $E_8$ ,  $E_9$  and  $E_{10}$  have to be managed in such a way, that transmission is secure. The same has to be ensured for the interface and between the supplier’s and the bank’s system at  $E_{11}$ .

A step further can be the development of a more dynamic application that is constantly connected to the bank’s CRM system in order to offer more individualised offerings. The idea of such an application is that the bank’s system is linked constantly to the application to provide relevant up-to-date data about banking offers, customer data, and customer preferences derived from stored information in the bank’s CRM system. The idea is that the output of such a connection can be more individualised customer processes and product offers. This can enable to position products where the customer has generated a need of which he is not cognitively aware yet and where one-to-one customised offerings are possible. However, it is more difficult to develop such a dynamic application. It can be assumed that disadvantages can arise from the fact that these are more costly, that they cannot be easily downloaded and that they need more integration between the bank’s IT system and the customers mobile application. Furthermore, it might raise privacy concerns. This idea of a dynamic application is still under development and needs more elaborate research.

### Features of Differentiation and Innovation

Current smartphone applications only cover small pieces of customer processes, i.e. products are offered in isolation. Based on the previously described business model, the application proposed here serves as a supporting tool for running through entire customer processes. This is incredibly convenient for the customer. First, solely the function from  $E_3$  to  $E_4$  that individualised customer process steps are provided creates great value added to the customer. If, on top, the customer is also suggested several options of best fitting suppliers, chances are high that



he will accept one of these offers and finally chooses the banking product offered within his process. Furthermore, since via the smartphone application the individualised customer processes are easily accessible mobile, adding substantial convenience to users compared to previous approaches like the process portal. The functional value added is created by the alignment of the bank's offerings to the customer processes which follows from the proposed business model. As a bank it is very difficult to create emotional value added, which is a major criterion for increasing sales of financial service products (Engstler 2006). Traditionally, emotional attachment to a bank strives from values of "trust" or "integrity". The smartphone application described in this paper can serve as an *enabler* to create emotional value added. Moreover, if the bank offers the application to customers of their bank, this enables faster and more secure administration of payments with the suppliers and the bank can earn increased commission fees, when customers buy products and services via the type of credit card the bank offers.

### Challenges and Success Factors

Sharl et al. (2005) deliver a model of success factors, which have to be taken into account when implementing a successful mobile marketing SMS campaign. The basic factor categories they developed are adopted as success factors for implementing the proposed application. However, some adjustments have to be made. First, the "message success factors" in Sharl et al. are changed into "application success factors", and "legal constraints" are included as a further determinant of success. In addition to this, in the case at hand success factors of the business model influence the application's performance and have to be included in the model as a further category. Analogous to Sharl et al., media success factors and customer beliefs are assumed to influence the application's success as well. Table 2 summarises the main issues that influence the successful implementation of the smartphone application presented in this paper.

Table 2. Challenges and Success Factors

Application Success Factors	Media Success Factors	Business Model Success Factors	Customer Beliefs
<i>Content:</i> The scope and number of pre-defined customer processes determine the range of target customer.	<i>Device Technology:</i> Smooth functioning and connection to back-end systems has to be assured.	<i>Quantity and Quality of Cooperating Partners:</i> Determines the holistic support of customer processes	<i>Attitudes:</i> Target customers are early adopters and persons preferring convenience. Corresponding attitudes have to be considered.
<i>Personalisation:</i> Is determined by the degree of individualised customer processes derived from information entered by the customer ( $E_4$ ) and information from the bank's database.	<i>Transmission Process:</i> Fast and reliable transmission of needed data from external databases has to be assured.	<i>Scope of Customer Processes:</i> Offerings should not be "too far away from banking", but match the bank's core competences.	<i>Usefulness and Ease of Use:</i> This determines the customer's degree of adoption of the application.
<i>Consumer Control:</i> Trade-off between personalisation and consumer control has to be assessed. The customers' need for privacy and secure connections have to be followed.	<i>Product Fit:</i> Customer types might differ depending on the smartphone provider. The application should be offered to the most promising ones.	<i>Revenue and Commission Structure of the Cooperation Network:</i> Favourable negotiations determine the business model's profitability.	<i>Peer Influence:</i> A lifestyle application can have a positive effect on peer influence (Gen Y peer group).
<i>Legal Constraints</i> Data Protection Acts might limit the usability of the application in certain countries.	<i>Media Cost:</i> Costs have to be limited so that the application can be offered at a moderate price.	<i>Legal Constraints:</i> These might limit the scope of implementation.	

### CONCLUSION AND AVENUES FOR FURTHER RESEARCH

The financial services sector can be characterised as extremely information rich (Karakostas et al. 2005), so that individualisation is important to fulfil customer needs. Individualised product and service offerings can be made possible by aligning the business offerings and processes towards the relevant customer processes. However, banks are still reluctant in identifying and supporting customer processes and the related literature has not been

sufficiently discussed this area yet. This paper contributes in this fast emerging domain (a) by proposing a business model for banks, which is orientated to the holistic support of banking-related customer processes, and (b) by showing how available mobile solutions can be utilised in order to create substantial functional and emotional value to the customer. Adopting the business model is a prerequisite to implement the smartphone application presented in this paper. The latter one enables banks to better integrate in people's lifestyle and their processes for positioning their products and services as an essential part of life events.

The research on the presented topic is still in its early stage, and hence opens up several avenues for further research activities. The described functionality has to be regarded as a first conceptualisation of a new IT artefact, and as such as the initial step of a larger design science research project. Subsequent stages of our research will seek empirical validation of our hypothesis that assumes benefits to the involved stakeholders. Further banking-related customer processes of typical smartphone users have to be identified, which will serve as a basis for developing a showcase model of the app for certain customer processes.

Having in mind the criteria offered by Engstler (2006) for increasing sales for financial products, the business model proposed in this paper and the implementation of a smartphone application, serving a primary distribution channel for this business model, promise to induce huge potential. First, it focuses on a new approach of "real" customer centricity which can become a competitive advantage in terms of differentiation. Second, the bank's position as a service integrator in the cooperation network ensures (i) the presence over the whole customer process which can have a positive impact on trust, (ii) control over the distribution channels throughout the whole customer process, (iii) the provision of value added services to the customer from the cooperation network, which a bank could not supply by itself. Moreover, the bank's position as single point of contact ensures a high frequency of interaction with the customer throughout the whole customer process, strengthening the personal relationship towards their retail clients. Finally, especially emotional value added, which is very difficult to be achieved by banks, can be created by offering the smartphone applications as a new lifestyle product for the bank's customers.

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